describes the distribution of pollution sources and of the ground water resource. Given the large number of chemicals and the need to have an accurate spatial distribution, management of this kind of data base requires computers for data storage, retrieval, and analysis. With this system, data from many sources can be integrated and presented in forms that are concise and understandable.

Setting up a computer-based data management and processing system is complicated and expensive. However, the state and local ground water protection program representatives interviewed by the committee felt that the long-term benefits outweighed the costs because they would have a much better basis for allocating scarce resources and for making regulatory decisions. In many states a number of different agencies are collecting data that are relevant to ground water contamination. It would be useful to have a central repository for these data, so that the pieces of information processed from different sources are in a compatible form to facilitate comparison. The rapid decline in cost for powerful computing systems and the improvements in software encourage the wider use of computer-based data processing systems for ground water protection. No state reviewed by the committee has a comprehensive computerized program that integrates source, hydrogeologic, water supply, and monitoring data. However, the committee expects the more progressive programs to be moving in this direction. Following are specific examples of data bases developed in several states reviewed by the committee.

California This state is developing a system that will develop county maps describing the pattern of (1) restricted pesticides use, (2) pesticides detected in ground water, (3) soil types, and (4) depth to ground water. It is expected that the overlay of this graphical information will help both local and state officials to identify potential contamination events so that action is taken before the problem becomes overwhelming. This program has just begun and currently produces only maps that indicate whether any restricted pesticide has been used and whether any pesticide has been detected. This type of information can be overlain with hydrogeologic and water supply information to estimate the potential range of contamination that may be associated with a given activity.

There are, of course, problems with large data bases whether or not they are computerized, but some of these problems can be alleviated by modification of a computerized system. For example, the pesticide use forms in California are filled out by clerks in the office of the local agricultural commissioner. They write in numbers on the forms that give the coordinates of the location of pesticide use. There are some errors in this information as evidenced by the reporting of some pesticide use in coordinates that correspond to areas in the Pacific Ocean. However, the pesticide program expects